

# MARCIN SENDERA

## AI Research Scientist

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★ Recommendation from Prof. Yoshua Bengio available

## PROFESSIONAL SUMMARY

*PhD in AI with a proven record of developing novel machine learning models and publishing at top-tier conferences (NeurIPS, ICML). Specialized in probabilistic deep learning, generative models, and AI safety. My research at Mila with Prof. Yoshua Bengio led to new methods for diffusion models and Bayesian inference. Seeking to leverage my expertise in fundamental research to solve challenging AI problems and advance the state-of-the-art.*

## RESEARCH EXPERIENCE

### Research Intern

#### Mila – Québec AI Institute

- 📅 Oct 2023 – Sep 2024 📍 Montréal, Canada
- Led fundamental research on generative models under the supervision of Prof. Yoshua Bengio, focusing on improving diffusion samplers and modeling Bayesian posteriors.
  - Co-authored four papers accepted at NeurIPS and ICML, with a leading role in two, contributing new techniques for off-policy training and posterior inference.
  - Collaborated with a team of world-class researchers on projects related to Safe AI and reasoning.

### Research Intern

#### University of Cambridge / Hutchison-MRC

- 📅 Jul 2018 – Sep 2018 📍 Cambridge, UK
- Developed a deep learning model for early cancer detection from DNA methylation data, achieving 98.2% multi-class classification accuracy and leading to a journal publication.

## INDUSTRY EXPERIENCE

### Machine Learning Engineer

#### UBS (R&D)

- 📅 Aug 2019 – Jul 2021 📍 Kraków, Poland
- Architected and developed an LLM-based system for automated information extraction from unstructured financial documents, improving data processing efficiency.
  - Researched and implemented novel NLP models to support decision-making for financial instrument investments.

## KEY PUBLICATIONS

A selection of first-author and key contributions. Full list on Google Scholar.  
**Sendera, Marcin**, Lukasz Struski, Kamil Ksiazek, Kryspin Musiol, Jacek Tabor, and Dawid Rymarczyk (2025). **SEMU: Singular Value Decomposition for Efficient Machine Unlearning**. In: *ICML*.  
**Sendera, Marcin**, Minsu Kim, Sarthak Mittal, Pablo Lemos, Luca Scimeca, Jarrid Rector-Brooks, Alexandre Adam, Yoshua Bengio, and Nikolay Malkin (2024). **Improved off-policy training of diffusion samplers**. In: *NeurIPS*.  
**Sendera, Marcin**, Jacek Tabor, Aleksandra Nowak, Andrzej Bedychaj, Massimiliano Patacchiola, Tomasz Trzcinski, Przemyslaw Spurek, and Maciej Zieba (2021). **Non-gaussian gaussian processes for few-shot regression**. In: *NeurIPS*.

## SKILLS

### Research Expertise

- Probabilistic ML | Generative Models | LLMs
- Foundation Models | Bayesian Inference
- Diffusion Models | AI Safety & Alignment
- Machine Unlearning | Meta-Learning
- Fine-tuning | Density Estimation | Reasoning

### Languages & ML Libraries

- Python | PyTorch | JAX | TensorFlow
- HuggingFace | NumPy / SciPy | Scikit-learn
- Pandas | Diffusers | LaTeX

### Developer Tools

- Git/GitHub | Docker | Slurm | GCP/AWS (Basic)

## EDUCATION

### Ph.D. in Computer Science

#### Jagiellonian University

- 📅 2019 – 2025/26 (exp.) 📍 Kraków, Poland
- Thesis: Probabilistic deep learning: from efficient sampling to principled generation.*  
GPA: 5.00/5.00

### M.Sc. in Computer Science

#### AGH University

- 📅 2017 – 2019 📍 Kraków, Poland
- GPA: 4.46/5.00

### B.Eng. in Computer Science

#### AGH University

- 📅 2013 – 2017 📍 Kraków, Poland
- GPA: 4.28/5.00

## GRANTS & AWARDS

- Winner of Witold Lipski Award for Young Computer Scientists (2025)
- Principal Investigator in National Science Centre (NCN) PRELUDIUM Grant (Funding: ~140k PLN )
- Working in multiple National Science Centre (NCN) OPUS grants - on probabilistic deep learning and meta-learning
- Team Member, CIFAR AI Catalyst Grant on "AI Mathematician"
- Best Paper Award Finalist, WACV2023

## REVIEWING

- ICML | NeurIPS | ICLR | WACV | CoLLAs